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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,247	07/15/2003	Arun Hampapur	728-235 (YOR9-2003-0122US	8908

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DILWORTH & BARRESE, LLP
333 EARLE OVINGTON BLVD.
UNIONDALE, NY 11553

EXAMINER	
AN, SHAWN S	
ART UNIT	**PAPER NUMBER**
2621	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,247	HAMPAPUR ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 15 July 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3/22/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Pollard et al (2002/0052708 A1).

Regarding claim 14, Pollard et al discloses a method for selectively monitoring movement of one or more objects in a 3D space, the method comprising:

detecting a position of one or more objects in the 3D space by collecting information from one or more static sensors (multi-camera tracking system; Fig. 1) [0007-0008; 0013];

selecting each of the detected object for monitoring, and uniquely identifying the selected object [0013];

assigning one or more variable sensors (15-18) to monitor the uniquely identified object [abs; 0013];

gathering information from the variable sensors for each identified object (abs; 0061; 0013);

detecting a direction of each identified object in the 3D space [0016]; and

controlling one or more variable sensors to continuously track the identified object [0015; 0061].

Regarding claim 15, Pollard et al discloses a computing device (20) for controlling static and variable sensors, wherein the sensors have control attributes (pan-tilt-zoom) [0015; 0061].

Regarding claim 16, Pollard et al discloses selecting one or more parts of the identified object and gathering information about each selected part [0047].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al (2002/0052708 A1) in view of Brill et al (6,816,184 B1).

Regarding claim 1, Pollard et al discloses a selective surveillance system, comprising:

a position detection means for selecting and uniquely identifying (outline of the object) each object of the one or more objects under surveillance (abs; Fig. 1, 15-18; [0007-0008; 0013]); and

means for gathering additional information (measurement signal) about one or more selected objects from variable sensors and controlling the one or more variable sensors (cameras) in following the one or more objects under surveillance by using position information ([0031; 0061]).

Pollard et al does not seem to particularly disclose a position tracking means for maintaining continuity of identity of all objects within the 3D space.

However, Brill et al teaches a monitoring system comprising a position tracking/mapping means for maintaining continuity of identity of all objects within the 3D space (Figs. 5-7).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the selective surveillance system as taught by Pollard et al to incorporate Brill's teaching as above so that the position tracking means maintains continuity of identity of all objects within the 3D space as a reference image as an efficient way to detect a moving object.

Regarding claim 2, Pollard et al discloses object(s) are from a moving target/object [0013] and a human [0009]. Therefore, it would have been considered obvious to one of skill in the relevant art to recognize that objects can be selected from a group consisting of a human, an animal, an insect, a vehicle, and a moving object as a matter of design choice.

Regarding claim 3, Pollard et al discloses object's attributes are from a color [0009], a shape (outline of the object) [0013], and speed (velocity) [0064]. Therefore, it would have been considered obvious to one of skill in the relevant art to recognize that object's attributes can be selected from a group consisting of speed, a color, a shape, a size and an aspect ratio as a matter of design choice.

Regarding claim 4, Pollard et al discloses multi camera tracking system (Fig. 1; [0015]). Furthermore, a sound/audio, an infrared, a GPS, a lorad, a sonar, and a radar positioning systems are conventionally well known in the art.

Therefore, it would have been considered obvious to one of skill in the relevant art to recognize that static sensors can be selected from a group consisting of multi camera tracking systems, a radar, a sound/audio, an infrared, a GPS, a lorad, and a sonar positioning systems as a matter of design choice.

Regarding claim 5, Pollard et al discloses variable sensors being a camera (15).

Furthermore, a directional microphone, an infrared sensor, a face recognition system, and an iris recognition system are conventionally well known in the art.

Therefore, it would have been considered obvious to one of skill in the relevant art to recognize that variable sensors which are movable in a plurality of directions can be selected from a group consisting of a camera, a directional microphone, an infrared sensor, a face recognition system, and an iris recognition system as a matter of design choice.

Regarding claim 6, Pollard et al discloses cameras (15-18), and the control attribute including a camera zoom measurement [0015; 0061].

Regarding claim 7, Pollard et al discloses the control attributes including a pan, a tilt, and a zoom, which can be adjusted for direction and/or field of view [0004; 0015; 0061]. Therefore, it would have been considered obvious to one of skill in the relevant

art to recognize that the control attributes could be selected from a group consisting of a pan, a tilt, and a zoom as a matter of design choice.

Regarding claim 8, Pollard et al discloses one or more object attributes being selected manually [0013].

Regarding claim 9, Pollard et al discloses an object selection policy, wherein the object is selected according to the object attributes compatible with the object selection policy [0013; 0009].

Regarding claim 10, Pollard et al discloses receiving from the static sensors (multi-camera tracking system; Fig. 1) visual data (pose/vector) and positional coordinates regarding each object and assigns positional information to the each object [abs; 0031; 0007-0008; 0013].

Regarding claim 11, Pollard et al discloses the control attributes including a pan, a tilt, and a zoom, which can be controlled/adjusted for direction and/or field of view and providing measurement signal corresponding to the exact instantaneous setting of each camera relative to the reference state [0004; 0015; 0061]. Therefore, it would have been considered obvious to one of skill in the relevant art to recognize that the control attributes could be selected from one or more control attributes and specifying a range of selected control attributes as a matter of design choice.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al as applied to claim 1 above, and further in view of Lemelson et al (6,633,238 B2).

Regarding claim 12, Pollard et al discloses directing variable sensors (cameras, 15-18) to the selected object by using position information, wherein the position information is collected from control attributes to control the sensors within the respective image [abs; 0031; 0009; 0004; 0015; 0061].

Pollard et al does not seem to particularly disclose using the object time information, and selecting (already discussed in claim 11) control attributes.

However, Lemelson et al teaches intelligent traffic control and warning system comprising calculating vehicle control unit's position in real time and then using that

information in determining appropriate responses to received warning messages (col. 11, lines 1-5). Note: Ito et al (6,445,409 B1) also teaches detection time and position.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the surveillance system as taught by Pollard et al to incorporate Lemelson's teaching as above so as to use/utilize the position information and corresponding time in order to efficiently operate the surveillance system in real time applications.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al (2002/0052708 A1) in view of Lemelson et al (6,633,238 B2).

Regarding claim 13, Pollard et al discloses a surveillance system, comprising:

a position detection means having one or more sets of cameras (Fig. 1, 15-18) for monitoring one or more objects that are moving in a 3D space [0007-0008], the position detection system uniquely identifies the respective objects with object position information at a time, the object having one or more attributes (outline of the object) (abs; [0013]);

an object selection policy means for selecting one or more objects that have attributes compatible with an object selection policy [0013];

one or pan-tilt-zoom cameras for sensing visual information from the objects and able to point the pan-tilt-zoom camera in a plurality of directions [0061]; and

a positioning means for controlling the positioner to point the pan-tilt-zoom camera to the object by using the object position information [0031; 0061)].

Pollard et al does not seem to particularly disclose using the object (position) time.

However, Lemelson et al teaches intelligent traffic control and warning system comprising calculating vehicle control unit's position in real time and then using that information in determining appropriate responses to received warning messages (col. 11, lines 1-5). Note: Ito et al (6,445,409 B1) also teaches detection time and position.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the surveillance system as taught by Pollard et al to incorporate

Lemelson's teaching as above so as to use/utilize the position information and corresponding time in order to efficiently operate the surveillance system in real time applications.

7. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al (2002/0052708 A1) in view of Ito et al (6,445,409 B1).

Regarding claim 17, Pollard et al does not seem to particularly disclose classifying one or more of the identified object into one or more classes and gathering information about each class, wherein the information gathering policy is different for each class.

However, Ito et al teaches method of distinguishing a mobbing object and apparatus for tracking and monitoring a moving object comprising classifying one or more of the identified object into one or more classes and gathering information about each class, wherein the information gathering policy is different for each class (col. 4, lines 64-67).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the surveillance system as taught by Pollard et al to incorporate Ito's teaching as above so as to efficiently detect and classify the identified moving object, thereby determining whether or not the moving object is the specified moving object.

Regarding claim 18, Pollard et al discloses a method for selectively monitoring movement of one or more objects in a 3D space, the method comprising:

detecting a position of one or more objects in the 3D space by collecting information from one or more static sensors (multi-camera tracking system; Fig. 1) [0007-0008; 0013];

selecting each of the detected object for monitoring, and uniquely identifying the selected object [0013];

assigning one or more variable sensors (15-18) to monitor the uniquely identified object [abs; 0013];

gathering information from the variable sensors for each identified object (abs; 0061; 0013);

detecting a direction of each identified object in the 3D space [0016]; and

controlling one or more variable sensors to continuously track the identified object [0015; 0061].

Pollard et al discloses all of the claimed features with the exception of a computer device embodying a program of instructions executable by the machine to perform the above methods.

However, Ito et al teaches a computer device embodying a program of instructions executable by the machine to perform a method of distinguishing a moving object and tracking/monitoring the moving object (col. 4, lines 34-63; col. 41, lines 52-54).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the surveillance system as taught by Pollard et al to incorporate Ito's teaching as above for implementing a software/program aspect of the above method, thereby saving operating/manufacturing costs associated with expensive hardware system.

Regarding claim 19, Pollard et al discloses a computing device (20) for controlling static and variable sensors, wherein the sensors have control attributes (pan-tilt-zoom) [0015; 0061].

Regarding claim 20, Pollard et al discloses selecting one or more parts of the identified object and gathering information about each selected part [0047].

Regarding claim 21, Ito et al teaches classifying one or more of the identified object into one or more classes and gathering information about each class, wherein the information gathering policy is different for each class (col. 4, lines 64-67).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S An* whose telephone number is 571-272-7324.

9. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHAWN AN
PRIMARY EXAMINER

12/16/06